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ABSTRACT

This paper reviews the research literature on factors contributing to adolescent emotional well-being, focusing on generalized mood/affective states, emotion regulation and coping, and feelings about self, including self-esteem, self-efficacy, and locus of control. Each construct is defined and evidence from research is presented to indicate the importance of the construct as an element of well-being in adolescence. The empirical literature exploring antecedents and correlates of emotional well-being is then summarized. Finally, the paper discusses implications for policies, programs, and interventions designed to promote adolescent well-being. The focus is on research pertaining to each layer of the adolescent's ecosystem (individual, parent and family, peers, school, neighborhood, and community), emphasizing longitudinal studies that examine predictors of emotional well-being but use multivariate analyses to take background characteristics into account, and emphasizing experimental or quasi-experimental evaluation studies of programs to promote emotional well-being. Studies that have been replicated with similar results across different populations and geographic regions are highlighted. The paper restricts discussion to studies incorporating outcomes during adolescence and studies using non-clinical populations only. The paper concludes by noting that there is consistency in individual differences in adolescent emotional well-being. Individual differences are associated with characteristics of adolescents' environments, parent and family characteristics, school characteristics, and neighborhood and community characteristics. Several of the studies present implications for programs and school reform efforts. There was a strong association between emotional well-being and positive environments that provide adolescents with a sense of belonging, acceptance, and support for autonomy. Appended is a table of the review of research and implications for targeted activities to improve adolescent emotional well-being. (Contains 92 references.) (KB)

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Child TRENDS

Background for Community-Level Work on Emotional Well-being in Adolescence: Reviewing the Literature on Contributing Factors

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Introduction

An emotionally healthy adolescent is one who experiences, on balance, more positive than negative emotions, who can flexibly regulate his or her emotion and behavior in order to maintain that positive balance, and who demonstrates positive coping skills that facilitate self-regulation. Further, emotionally healthy adolescents perceive themselves as competent and efficacious in achieving important goals, and consequently experience relatively high levels of self-esteem. Facilitating each of these elements of emotional well-being is a sense of control—the adolescent's belief that he or she can achieve positive outcomes and avoid negative outcomes through his or her own actions.

As suggested by this description, the term "emotional well-being" has been used in the empirical and theoretical literature on adolescent development to cover a wide range of more specific aspects of psychological functioning, such as coping, emotion regulation, self-regulation, self-esteem, perceived autonomy and control, social competence, depression, and substance use and abuse. The use of emotional well-being as an umbrella term recognizes the important roles that emotions play in all aspects of human behavior and development—including mental and physical health, education and skill development, social competence and the establishment of positive social relationships (e.g. Lazarus, 1991; Thompson, 1990).

This paper will focus on a selected set of topics that are included in the definition of emotional well-being presented above. These are a) generalized mood/affective states, b) emotion regulation and coping, and c) feelings about self, including self-esteem, feelings of self-efficacy, and perceptions of control (locus of control). We will begin with brief definitions of the constructs just delineated, along with some evidence from the research literature indicating the importance of each construct as an element of well-being in adolescence. Next, we will summarize the empirical literature exploring the antecedents and correlates of emotional well-being in adolescence. Finally, we will discuss some of the implications of this literature for policies, programs, and interventions designed to promote adolescent well-being.

State of the Research Literature and Methodology for Review

The empirical literature pertaining to emotional well-being in adolescence is underdeveloped. Although there are numerous studies of emotional well-being in adolescence, particularly studies of emotion and of self-esteem, many of these studies have serious conceptual and methodological limitations. Among the principle methodological limitations are that few studies employ longitudinal designs and that the majority of published reports rely exclusively, or nearly so, on self-report measures. Cross-sectional designs do not allow for hypothesized predictive relations among constructs to be assessed. Although the use of self-report is crucial for assessments of self-esteem and perceptions of self, the use of self-report to the exclusion of other measures can be problematic (see Repetti, McGrath, & Ishikawa, 1999). Studies that include reports from parents, teachers, and peers as well as self-report provide a richer source of information about adolescent functioning. Although rare in the adolescent emotional well-being literature, studies that include observations of adolescent behavior and interactions with parents and others can also provide independent information on adolescent emotional well-being.

Further, a review of available research suggests that much of the empirical work that is currently being conducted is taking place in Europe and Asia. This is particularly the case for research on perceived competence and locus of control. The applicability of these studies to

adolescent development in the United States is an open question. Some of the research, such as studies dealing with general developmental trends and to some extent the influences of relationship processes on emotional well-being may be relevant. Other research, particularly studies dealing with gender, ethnic group differences or effects, and SES, may be of less relevance, given substantial cross-cultural and cross-national differences in gender roles, in the status of women and ethnic minorities, and in policies regarding provision of supplemental income to families in need.

In our review, we will selectively focus on research pertaining to each layer of the adolescent's ecosystem. We emphasize studies that are longitudinal, involving the examination of aspects of the environment as predictors of emotional well-being but that use multivariate analyses taking background characteristics of families into account. Further, we have attempted to find experimental or quasi-experimental studies in which programs designed to modify systematically the environment in order to promote emotional well-being in adolescence have been evaluated. We have emphasized these types of studies for several reasons. Longitudinal studies that contain adequate consideration of background characteristics can address change over time and predictive validity better than cross-sectional studies. Experimental or quasi-experimental studies that include control groups are better at controlling for selection biases than are other designs (as long as there is not extensive attrition in the sample over time). We also highlight studies that have been replicated with similar results across different populations and geographic regions, because findings from such studies are more likely to be generalizeable to new populations of adolescents. Since the focus of the paper is on adolescents, we have also restricted studies to those that have outcomes during adolescence. Therefore, the effects of different antecedents into adulthood are not considered; nor are studies that have outcome data only for childhood. However, we do include longitudinal studies that began in childhood and continued into adolescence, as well as some studies that examine continuities in emotional well-being into young adulthood. Throughout this paper, our aim is to go beyond the broad identification of factors that appear to be associated with emotional well-being, to the identification of specific factors that promote emotional well-being. Finally, none of the studies included in this report utilize clinical populations. This decision was made because an exploration of mental health in adolescence is beyond the scope of this paper. Thus, although depression scales are frequently used in the assessment of positive versus negative affect in the studies described, relatively few adolescents in these studies will meet diagnostic criteria for clinical depression, anxiety disorders, or other mental health conditions.

Definitions of the Components of Emotional Well-Being

Affect and Mood

As described earlier, emotional well-being in adolescence (and throughout the life span) is typified by a predominance of positive affect. This includes the experience as well as the expression of positive emotions, such as happiness, interest, and pride. Although negative emotions such as fear, anger, and guilt serve adaptive functions in reaction to environmental events (e.g., Barrett & Campos, 1987), these emotions become maladaptive when they predominate over the positive emotions.

Researchers examining affect and mood states in adolescence frequently focus on emotion as a characteristic of temperament or personality. The majority of research that has been conducted on adolescent emotion has focused on the negative emotions. Predominant in

this literature is research using self-report measures of depressive symptoms. Such measures include the Childhood Depression Inventory (CDI; Kovacs, 1981) the Center for Epidemiological Studies – Depression Scale (CES-D; Radloff, 1977), and the internalizing scale of the Youth Self Report (Achenbach, 1991). These types of measures have been reported to be both reliable and valid measures of individual differences in negative emotions and related depressive symptoms (e.g. social withdrawal, somatic complaints, self-destructive thoughts). Emotional well-being is not simply the absence of high levels of negative emotion, however, and studies including only depression indices may be limited in the types of information that they can provide. Also, it should be noted again that this report does not include research on clinical populations (e.g., those with major depressive disorder). Discussion of clinical populations can be found in the paper on mental health and externalizing disorders.

There are other types of self-report measures that have been utilized in studies of emotional well-being that do tap a wider range of emotions, including positive emotions such as happiness and interest, as well as more specific negative emotions such as anger and sadness. Included among these are measures such as the Multidimensional Personality Questionnaire (MPQ; Tellegen & Waller, 1993) that tap positive emotionality and negative emotionality as stable personality traits, as well as measures such as the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) that tap emotion states by asking individuals to report the extent to which they have felt a variety of emotions within the recent past. Still other studies have used diary formats in which adolescents are asked to report on their experiences of emotion one or more times per day over the course of several days. Research using this type of method has been particularly useful in describing temporal characteristics of mood states across hours of the day, or across days of the week. For example, Barber, Jacobson, Miller and Petersen (1998) found, using a diary method, that adolescent moods were similar to those of adults, and that males and females had similar mood cycles across hours of the day and days of the week. These results are particularly interesting because they run counter to theories suggesting that adolescence is a period of heightened emotional volatility.

Emotion Regulation and Coping

Emotions are frequently described as serving motivational functions in behavior and development (e.g., Bridges & Grolnick, 1995; Eisenberg, Fabes, & Guthrie, 1997; Lazarus, 1991; Thompson, 1990). However, as noted by Thompson (1990),

> Emotion can energize, motivate, and guide adaptive functioning, but its capacity to do so depends on the diverse processes by which emotion is regulated. Emotional regulation is required both to provide flexibility (rather than stereotypy) to the behavioral processes that emotions help to motivate and direct and also to enable organisms to respond quickly and efficiently to changes in their conditions by maintaining internal arousal within performance-enhancing limits...In essence, emotional regulation is essential to enlisting emotive processes into the organized and psychologically adaptive higher-order control of behavior (pp. 394-395).

Emotion regulation involves a set of processes used by individuals to initiate, maintain, and modulate both the expression and the experience of positive and negative emotions (Bridges & Grolnick, 1995; Kopp, 1989). Emotion regulation processes are viewed as a subset of

interrelated self-regulatory processes that also involve the regulation of cognition, attention, and behavior (Eisenberg et al., 1997; Karoly, 1993). These processes are constantly ongoing and, when functioning optimally, allow individuals to maintain interaction with their social and physical environments (Bridges & Grolnick, 1995). As indicated by Thompson's description, emotion regulation is not equivalent to emotion control—a term which connotes suppression and dissemblance of emotional expression, and a tendency to repress the experience of emotion. Rather, emotion regulation as a component of emotional well-being is characterized by the ability to experience genuine emotions without becoming overwhelmed by them, and the ability to express genuine emotions in ways that are socially appropriate and that do not unduly disrupt ongoing interactions within the social environment.

There has been considerably more empirical and theoretical focus on emotion regulation during infancy and early childhood than during adolescence. Coping, a construct that is highly related to emotion regulation, has received somewhat more attention in the literature on adolescent well-being. Coping and emotion regulation are both elements of a more general system of self-regulatory processes. The primary distinction between coping and regulation is that regulation, as discussed earlier, is an ongoing process—individuals are continuously regulating their emotions and behaviors in order to maintain positive connections within their physical and social environments. In contrast, coping involves the regulation of behavior and emotion in the face of specific challenges (e.g. Compas, Connor, Saltzman, Thomsen, & Wadsworth, 1999; Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Eisenberg et al., 1997). As defined by Lazarus and Folkman (1984), coping involves "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141).

Some researchers and theorists, notably Compas and colleagues (Compas et al., 1999, 2001) and Weisz and colleagues (e.g. Rudolph, Dennig, & Weisz, 1995; Weisz, 1990), further restrict the term coping to include only behaviors and cognitions that are conscious and intentionally implemented. Others, however, such as Skinner and Wellborn (1994, 1997) and Eisenberg and her colleagues (1997) also include unconscious and involuntary reactions as possible coping responses. The vast majority of the research literature on coping in adolescence involves self-reports of how individuals react to stressors, however, and thus clearly focuses on conscious and intentional cognitions and behaviors.

Although there are numerous theoretical and empirical approaches to describing coping, most approaches include a distinction between two fundamentally different types of coping strategies (see Compas et al., 2001). The first type of strategy involves efforts to manage stressful situations by altering or mastering aspects of the environment or of the individual, thereby altering the situation in order to make it less stress-provoking. Lazarus and Folkman (1984) referred to this as problem-focused coping. The second type of coping strategy involves efforts to regulate negative emotion aroused within stressful contexts. With this second type of coping there may be no objective change in the stressful situation, but the individual is using behavioral or cognitive strategies to reduce perceived distress. Lazarus and Folkman (1984) termed this type of response emotion-focused coping.

Similar distinctions have been made by other researchers. Two of the most prominent distinctions found within the adolescent coping literature are those of Weisz and his colleagues (e.g., Rothbaum, Weisz, & Snyder, 1982; Weisz et al., 1994), and Ebata and Moos (1991). Weisz and colleagues distinguished between primary and secondary coping. Primary coping refers to efforts to modify a stressful condition, while secondary coping refers to efforts to

improve one's "goodness of fit" with conditions as they exist. Ebata and Moos also described two broad dimensions of coping—approach and avoidance. Approach coping involves cognitions and behaviors that maintain focus on the stressful situation, while avoidance coping involves cognitions or behaviors designed to minimize focus on the stressful situation. For example, persistence in efforts to solve a difficult problem is an example of approach coping, while trying to ignore a difficult problem is an example of avoidance coping.

Most current conceptualizations of coping propose that individuals develop coping styles that are generalized ways of coping exhibited across a variety of contexts (however, see Skinner & Wellborn, 1994). At the same time, however, individuals develop a wider array of coping strategies that can be employed as behavioral and cognitive responses to specific stressors within specific contexts, and most theorists and researchers in the coping area agree that positive coping involves flexibility in the deployment of different coping strategies according to the types of stressors encountered (see Compas, 1987; Compas et al., 2001; Weisz & Dennig, 1993). The distinction between general coping styles and specific coping strategies is important, because no single type of coping strategy can be optimal in every stressful situation. Problem-focused coping strategies, for example, may be optimal under conditions where the individual can in fact alter the objective conditions of stress, while emotion-focused coping efforts may be most adaptive under conditions where negative events are uncontrollable. Thus, the contribution of particular coping strategies to emotional well-being cannot be determined without reference to the contexts in which coping efforts are occurring.

Some studies of adolescent coping have indicated that the relative use of different types of coping changes across adolescence. In a cross-sectional study comparing coping responses to family, peer, and school stressors, Griffith, Dubow, and Ippolito (2000), for example, found that the use of approach coping increased across seventh, ninth, and twelfth grades. Across all grades, however, adolescents were found to use more avoidance than approach coping strategies for family stressors, and more approach than avoidance coping for school and peer stressors.

Feelings about Self

There are a number of self-related constructs that have been examined in investigations of adolescent emotional well-being. Perhaps the most frequently-studied construct is global self-esteem or self-worth. Other highly-related constructs include specific self-esteem, self-efficacy, and perceived competence. A third set of constructs that are theoretically linked to emotional well-being involve perceptions of control, or locus of control.

Self-esteem, or self-worth

Self-esteem, or self-worth, is an emotional component of self-evaluations of personal qualities and competencies—generally how good or bad individuals feel about themselves. The terms self-esteem and self-worth are most commonly used to describe a global view of self, without reference to specific competencies (Harter & Marold, 1994; Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995). Both Harter and Rosenberg distinguish between this global, affective sense of self-worth and more specific perceptions of competence within particular domains of functioning. According to Harter (e.g. Harter, 1990; Harter & Jackson, 1993; Harter & Marold, 1994), self-worth is affected by perceptions of competence or adequacy within specific domains, such as academics, social relationships with peers, or behavioral conduct. Consistent with the writings of James (1892), however, Harter suggests that it is primarily competence within domains that are perceived to be of high personal importance to the

individual that affects global feelings of self-worth. Harter further suggests that, consistent with Cooley's (1902) description of the role of reflected appraisals (the "looking-glass self") in qualities of self-feeling, self-worth will also be affected directly by perceptions of support (perceived liking, and approval) from important others in ways that may have very little to do with actual specific competencies or perceptions of competence. Harter and her colleagues (e.g. Harter & Jackson, 1993; Harter & Marold, 1994) have found empirical support for additive influences of both perceptions of competence in important domains as well as perceptions of support to individual differences in global self-worth.

Rosenberg and his colleagues (1995) add a further distinction between global self-esteem and specific competences, which they refer to as specific self-esteem. Rosenberg and colleagues view global self-esteem as a primarily affective construct, while specific self-esteem is primarily cognitive. Because of its predominantly affective nature, Rosenberg and colleagues (1995) suggest that global self-esteem should be strongly related to measures of other aspects of psychological well-being (such as depression), but should not be expected to be strongly associated with behaviors or behavioral competencies within specific domains.

Self-esteem has been included in numerous studies of adolescent well-being, although frequently the theoretical rationale for inclusion is minimal or lacking. Studies of self-esteem in adolescence have consistently found higher (more positive) self-esteem reported by males than by females across adolescence (e.g., Block & Robins, 1993; Chubb, Fertman, & Ross, 1997). Some studies have also found general age trends, with levels of self-esteem increasing across adolescence, although this finding is less consistent and age changes are frequently found to differ for males and females (e.g. Block & Robins, 1993).

Specific self-esteem, perceived competence, and self-efficacy

Unlike global self-esteem, specific self-esteem (Rosenberg et al., 1995), perceived competence (Harter, 1983) and self-efficacy (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996) are terms used to describe individuals' beliefs that they are competent within specific domains, such as cognitive or academic domains, physical ability and attractiveness domains, peer and family social domains, and behavioral domains. Researchers such as Harter (e.g. 1983, 1990; Harter & Marold, 1994), Marsh (e.g., 1990; Marsh, Craven, & Debus, 1999; Marsh, Parker, & Barnes, 1985; Marsh & Shavelson, 1985), and Rosenberg (Rosenberg et al., 1995) have found empirical support for the view that self-perceptions of competence within specific domains are distinct constructs demonstrating low to moderate associations with each other. Further, perceived competence has been found to be associated with global self-worth, but the strength of this association is dependent upon the perceived importance the individual places on competence within the specific domain (see Harter & Marold, 1994).

Perceived competence or specific self-esteem is used less frequently in studies of adolescent emotional well-being than are measures of global self-worth. When self-perceptions are used in studies to predict elements of emotional well-being such as affect and mood, this may be appropriate. As suggested by Rosenberg and his colleagues (1995), global self-esteem should be strongly related to measures of other aspects of psychological well-being (such as depression), while measures of domain-specific perceived competence (proposed by Rosenberg and colleagues to be more cognitive in nature) should not be expected to be as strongly associated with emotionality when assessed as a personality trait or a generalized mood state. When perceived competence measures have been included in research with adolescent populations, these are most frequently studies that focus primarily on academic outcomes as well as school-

related aspects of emotional well-being such as perceptions of control and autonomy within classrooms and emotional as well as behavioral engagement with schooling (e.g., Connell, Spencer, & Aber, 1994; Connell & Wellborn, 1991).

Locus of control, perceived control, and perceived autonomy

Perceptions of control and autonomy are key elements of emotional well-being. Most clearly, perhaps, perceptions of competence and self-efficacy are only possible when individuals perceive themselves as able to exert control over their environments (e.g. Bandura et al., 1996; Skinner, Zimmer-Gembeck, & Connell, 1998). A wide-ranging body of theoretical and empirical research is developing indicating that individuals who believe that they can exert control over their own behaviors as well as over the outcomes that they experience (i.e., who have highly internal perceptions of control, or an internal locus of control) are less susceptible to negative affect and depression, exhibit more positive coping skills and self-regulation, and have higher levels of self-esteem and perceived competence when compared with individuals whose perceptions of control are more external (e.g., Connell & Wellborn, 1991; Deci & Ryan, 1985; Dweck & Leggett, 1988; Seligman, Kamen, & Nolen-Hoeksema, 1988; Skinner & Wellborn, 1997; Skinner et al., 1998; Weiner, 1985). Further, perceptions of control have been linked positively to other aspects of well-being, including health outcomes in adults (Rodin, 1986) and academic performance in children and adolescents (e.g. Connell & Wellborn, 1991; Skinner et al., 1998).

A number of studies have examined age and gender differences in perceptions of control across adolescence. Chubb and colleagues (1997), for example, found that perceptions of control became increasingly more internal, and less external, across grades for both boys and girls. Their sample included 174 students (41% male, 95% White) who were first assessed in ninth grade and who were subsequently followed annually for three consecutive years.

Antecedents of Emotional Well-Being in Adolescence

Individual Characteristics as Antecedents of Adolescent Emotional Well-Being

Much of the research on adolescent well-being has focused on consistency and change in individual differences in elements of emotional well-being (e.g., positive and negative emotionality, self-esteem, perceived competence), and in the longitudinal and concurrent associations among different elements. A few notable studies have included longitudinal assessments of individuals from early childhood through adolescence, although the bulk of the research on emotional well-being in adolescence has been cross-sectional or has involved shorter longitudinal studies across later childhood and adolescence. Such research effectively treats these components of emotional well-being as personality characteristics, although it does not address the extent to which individual differences are innate versus a product of interactions within the social and physical environment. As we will see in a later section, however, there are clearly strong environmental influences on emotional well-being, and it is most likely the case that individuals' characteristics interact with the environment to produce greater or lesser emotional well-being throughout the lifespan. In general, as will be described below, such research indicates that elements of emotional well-being are interrelated, and that prior positive emotional well-being is associated with continued positive feelings in the transition from childhood to adolescence, and from adolescence to young adulthood.

Concurrent associations among component measures of emotional well-being in adolescence

Perhaps the most frequent type of study on emotional well-being in adolescence involves concurrent associations among constructs reflecting elements of emotional well-being. Most of these studies report significant associations among constructs, although results from concurrent analyses cannot be used to assess predictive associations. In two studies, Rosenberg and colleagues (Rosenberg, Schooler, & Schoenbach, 1989; Rosenberg et al., 1995) reported on Bachman's analyses of the Youth in Transition study, a longitudinal study of boys who were in tenth grade in 1966. Data from 1,886 boys who participated in the first two waves of data collection were included in the analyses presented in these two reports. In the first of these studies, Rosenberg and colleagues (1989) assessed reciprocal relations between global self-esteem and depressive affect, school grades, and delinquency. These researchers found that self-esteem and depressive affect significantly affected each other, but that the negative relationship between these two measures was due somewhat more to the effects of depressive affect on self-esteem than the reverse. In contrast, relations between grades and self-esteem were primarily attributable to effects of school performance on self-esteem, rather than the reverse. Finally, results involving self-esteem and delinquency were somewhat more complex. Low self-esteem was found to promote delinquent behavior. At the same time, there was a positive association between delinquent behavior and self-esteem among lower socioeconomic status boys. These results were interpreted by the authors as indicating that, under certain circumstances, delinquent behaviors can actually enhance feelings of self-worth.

In a second study, Rosenberg and colleagues (1995) further examined associations between both specific and global self-esteem and affective and behavioral outcome measures. These researchers found support for their hypothesis, presented earlier, that global self-esteem should be most associated with affective outcome measures, while specific self-esteem should be most strongly associated with specific behavioral competencies. In their study, as hypothesized, substantially higher correlations were obtained between measures of positive and negative affect and global self-esteem than between these same measures and academic self-esteem, while grade point average was more strongly associated with academic self-esteem than with global self-esteem.

Kurman and Sriram (1997) found that self-enhancement (the tendency to exaggerate positive characteristics—in this case grades obtained in school and how well the student was doing in school), global self-esteem, optimism, positive affectivity, and negative affectivity were all interrelated fairly similarly across samples of eighth grade students from two dissimilar cultures—302 Chinese students from Singapore and an urban Israeli sample of 330.

Griffith and colleagues (2000) examined relations between coping strategy use, anxiety, and self-reported adjustment in their sample of 375 (53% male, 76% White, 12% African-American, 9% Hispanic) seventh, ninth, and 12th graders from a semi-rural, industrial U.S. community. They found that students who generally reported using more approach coping also reported more positive self-perceptions of adjustment and low levels of anxiety. In contrast, high levels of avoidance coping were associated with less favorable outcomes. Demographic characteristics, including family socioeconomic status and parents' marital status, were not associated with coping or adjustment measures. Despite fairly consistent gender differences in the levels of approach coping, avoidance coping, and anxiety reported (with females tending to

have higher mean scores for all of these measures), associations between coping strategy use and anxiety were similar for males and females.

Antecedents of negative and positive emotionality

Temperament and personality theorists propose that there are stable individual differences in the frequency and intensity with which negative emotions such as anger and fearfulness, and positive emotions such as happiness and interest, are expressed and experienced. Such tendencies, originating in infancy and early childhood, have been hypothesized to continue to affect emotional well-being throughout life (e.g. Goldsmith, Buss, Plomin, Rothbart, Thomas, Chess, Hinde, & McCall, 1987). To date, however, only a few studies have collected the necessary long-term longitudinal data in order to assess long-term impacts of early temperament on adolescent. One particularly famous study in this area, the New York Longitudinal Study (e.g., Thomas & Chess, 1986), although widely acknowledged as a pioneering study on temperament and personality, has been criticized for its highly selective sample of children of high-SES New York families and for a lack of control and rigor in research design.

One study has reported longitudinal consistency in affective temperament and personality characteristics from early childhood (age three) to late adolescence (age 18). Caspi and Silva (1995) reported on findings from the Dunedin (New Zealand) Multidisciplinary Health and Development Study. Of the 1,037 children who were assessed via observations at age three (91% of those that could be traced from the original birth cohort), 1,008 were reassessed using the Multidimensional Personality Questionnaire (MPQ; Tellegen & Waller, 1993) at age 18. Because this study involved most of an entire one-year birth cohort, characteristics of the sample closely resembled the SES and ethnic characteristics (predominantly of European ancestry) of the local population. Initial gender comparisons revealed no evidence of consistent differences. Caspi and Silva found evidence of consistency in personality characteristics across this 15-year age span. Among the most notable findings with respect to emotional well-being in particular, the 18-year-olds who were classified as temperamentally under-controlled at age three (i.e., who exhibited a cluster of characteristics including irritability, distractibility, uncontrolled behavior and being emotionally open to change) self-reported relatively high levels of negative emotionality (e.g., strong negative emotional reactions to everyday events, feelings of victimization and mistreatment, and hostile interpersonal relationships).

Block, Block, and colleagues conducted a longitudinal study examining elements of emotional well-being from childhood through adulthood (e.g. Block, Gjerde, & Block, 1991; Block & Robins, 1993). This study began assessing a group of 128 three-year-old boys and girls, most of whom were subsequently assessed at ages four, five, seven, 11, 14, 18, 23, and beyond. Assessments included not only self-report measures, but parent- and teacher-report, direct examination, and observations by trained study staff. In one report, Block and colleagues (1991) examined the consistency of negative affect from childhood through late adolescence. These researchers found that depressive symptoms at age 18 were associated with personality characteristics at earlier ages. There were very large gender differences in the particular correlates, however, consistent with the researchers' gender-based hypothesis that depression in male adolescents would be associated with earlier personality characteristics reflecting a tendency to express unhappiness by acting out, while females would exhibit their unhappiness in more self-focused ways. Block and colleagues reported that, by age seven, boys who were later identified as having relatively high levels of depression tended to be described by their teachers as aggressive, under-controlled, and limit-testing. Girls who subsequently reported relatively

high levels of depression, in contrast, tended to be seen as competent and reflective. Depression at age 18 was also associated with low self-esteem for girls at age 14, but not for boys.

Another important longitudinal study examining adolescent development is the Iowa Youth and Families Project, conducted by Conger and his colleagues (e.g., Ge & Conger, 1999; Kim, Conger, Lorenz, & Elder, 2001). The focus of this six-year project was to examine the effects of economic downturn on family functioning and adolescent development. It is important to note that the adolescents in this study are far from representative of youth nationally. The more than 400 participating families came from rural Iowa, all were two-parent families at the time of the first assessment, and all had at least two children—the seventh grade adolescent originally recruited for the study and one other child within four years of the target adolescent's age. Despite the lack of representativeness, this study provides one of the richest sources of information on adolescent development currently available. Ge & Conger examined predictors of personality in late adolescence. Levels of, and changes in, psychological distress (including depression, anxiety, somaticization, and hostility) experienced from 7th through 10th grades were significantly related to negative and positive emotionality during 12th grade. Kim and colleagues found that individual differences in negative emotion expressed by adolescents in interactions with parents demonstrated consistency across 8th, 10th, and 12th grades. Adolescents who expressed relatively more negative emotion in 8th grade continued to do so in 10th and 12th grades. These individual differences were sustained despite a general age trend of increasing negativity across adolescence, peaking at the 10th grade assessment and declining somewhat by 12th grade.

The longitudinal Maryland Adolescent Growth in Context Study (MAGICS) is another rich source of information on adolescent development, including contributors to individual differences in levels of and changes in emotional well-being across adolescence. This study has several unique features that make it of particular interest. The sample size is quite large (over 1,200). Participants were recruited from schools located within a county that includes a mixture of urban, suburban, and rural communities. The sample reflects the economic and ethnic diversity of the community. Approximately 61% of the participants are African American, and there is a wide range of SES. Information on adolescents was obtained from multiple sources, including the adolescents themselves, their parents or other caregivers, school personnel, older siblings, school records, and 1990 census data banks. In one study based on MAGICS that specifically focused on personal antecedents of emotional well-being, Roeser, Eccles, and Sameroff (1998) found that eighth grade emotional functioning (i.e., few self-reported symptoms of depression or anger) was predicted by seventh grade emotional functioning, as well as by self-perceptions of academic competence and by academic values (i.e., endorsement of intrinsic reasons for going to school, such as liking to learn, enjoying classes, and wanting to learn).

Using shorter-term longitudinal research designs, other researchers have found that tendencies to experience and express negative and positive emotions demonstrate some consistency across time and across situations for individuals, and that self-report measures can be reliably used with older children and adolescents to tap these consistent individual differences in negative and positive emotionality (e.g., Tellegen & Waller, 1993; Watson, Clark, & Tellegen, 1988). Further, researchers using a behavior genetics approach to personality have found substantial genetic influences on positive and negative affects and moods (e.g., Plomin, DeFries, McClearan, & Rutter, 1997; Tellegen, Lykken, Bouchard, Wilcox, Segal, & Rich, 1988). In one recent study, Cole, Peeke, Doleza, Murray, and Canzoniero (1999) examined the consistency of negative affect and perceived social and academic competence across four waves in a two-year

longitudinal study of 436 White and African American middle school students (ages 11 to 13 at time 1) from socioeconomically diverse backgrounds. These researchers found high levels of consistency for each of the three constructs across all waves. Similar results were reported, using very different research techniques, by Freeman, Csikszentmihalyi, and Larson (1986). In a very small sample (N=27), adolescents were studied during two one-week intervals spaced two years apart. During each week, adolescents were asked to describe affective states when signaled to do so at random time intervals. Adolescents were also asked about changes in affective states across the two-year span. Freeman and colleagues found that individual differences in positive versus negative affect were fairly stable across time and there was no overall change in the amount of positive versus negative affect described by the adolescents, despite a strong tendency to perceive overall positive change.

Antecedents of self-esteem

A number of studies have investigated stability and change in measures of global self-esteem and perceived competence across adolescence (e.g. Block et al., 1991; Block & Robins, 1993; Keefe & Berndt, 1996). These studies tend to find substantial consistency in individual differences across time. One study that has examine consistency and change in self-esteem across adolescence is the longitudinal study of personality and cognitive development conducted by Block, Block, and colleagues (e.g., Block et al., 1991; Block & Robins, 1993), described earlier. In one report based on this study, Block and Robins (1993) assessed self-esteem as the level of congruence between descriptions of an "ideal self" (i.e., how the adolescent describes the person he or she would really like to be) and "perceived self" (i.e., how the adolescent actually perceives him or herself currently). Using this measure, they found that there was substantial consistency in self-esteem across ages 14, 18, and 23, but also several gender-related differences. As mentioned earlier, Block and Robins reported that self-esteem tended to increase across adolescence for boys, while decreasing for girls. Further, Block and Robins reported greater consistency across time for females than for males. Consistent with their earlier work on gender socialization (Block, 1973), these authors suggest that socialization practices that are more restrictive and less autonomy supportive for girls than for boys may tend to promote these differences.

The Michigan Study of Adult Life Transitions (MSALT) is a longitudinal study, conducted by Eccles and her colleagues. Data collection for this study began in 1983 with a large sample of predominantly Caucasian, low- to middle-income fifth- and sixth-grade students who have now been followed into young adulthood. As with most of the other longitudinal studies described in this report, MSALT participants are not representative of the U.S. adolescent population. Nonetheless, the long-term longitudinal nature of the study, the large sample size, and the in-depth measures used make MSALT a rich source of high-quality data pertaining to adolescent development. In one report from this study, Lord, Eccles, and McCarthy (1994) found that greater levels of confidence in own academic, social, and athletic abilities in sixth grade were associated with increases in global self-esteem across three additional waves of data collected in sixth and seventh grades. These researchers found that the most salient predictors of positive self-esteem change were positive self-concepts of math ability, physical attractiveness, and peer social skill. In contrast, worries and self-consciousness about math, school deadlines, and social acceptance were the most salient predictors of declines in self-esteem.

Antecedents of perceived competence

In their well-designed study described earlier (see page 13), Cole et al. (1999) found that, despite the high levels of stability across time reported for each of their measures, levels of negative affect predicted changes in perceived academic competence for both boys and girls. That is, middle school students who self-reported relatively high levels of negative affect at the beginning of the study were subsequently more likely to experience decreases in perceived academic competence over the two years of the study than were students who initially reported less negative affect. Interestingly, however, Cole and colleagues found that the causal direction appeared to be reversed for perceived social competence. Low levels of perceived social competence predicted increases in negative affect across assessments, but negative affect did not uniquely predict changes in perceived social competence.

Summary

Cross-sectional and longitudinal studies of elements of emotional well-being have found expected associations among the various constructs. Longitudinal research has been conducted on the individual characteristics that predict subsequent individual differences in negative and positive affectivity, and on antecedents of individual differences in self-esteem and perceived competence. Specifically, one longitudinal study indicated that positive self-concepts of math ability, physical attractiveness, and peer social skill may predict positive self-esteem, and that negative self-concepts in math ability, ability to meet school deadlines, and social acceptance were associated with declines in self-esteem. Another longitudinal study found that adolescents who reported high levels of negative feelings at the beginning of the study were more likely to perceive themselves as less academically competent but not less (or more) socially competent; however, adolescents who started out the study not feeling very socially competent were more likely to show increases in negative feelings over time. While these longitudinal studies mentioned are strong, well-designed studies, their findings will need to be replicated before final conclusions about the antecedents of individual differences in self-esteem and perceived competence can be made. In addition, little longitudinal research has been conducted at this time addressing longitudinal predictors of individual differences in coping styles or strategy use.

Parent and Family Characteristics

Perhaps the most frequently theoretically proposed and empirically examined antecedents of adolescent emotional well-being, other than earlier indicators of emotional well-being, are parent and family characteristics. Among the parent and family characteristics that have been examined are parent-adolescent relationship characteristics, parenting styles and discipline practices, and characteristics of parents and families that may affect adolescents directly or indirectly, through effects on parenting (e.g., divorce, interparental conflict or harmony).

Parent-child relationship characteristics

Early parent-child relationship characteristics, including the quality of attachment relationships and parents' warmth, sensitivity, and responsiveness have been theorized to be important influences on individual differences in the development of positive and negative emotionality, self-regulation, coping, self-esteem, perceptions of competence, and perceived control (see Harter, 1983), although there is little longitudinal research that would empirically demonstrate linkages from early childhood to adolescent outcomes. There are, however, a

number of shorter-term longitudinal and cross-sectional investigations of associations between adolescent emotional well-being and parent-child relationship characteristics during adolescence and the transition to adolescence (Call & Mortimer, 2001; Juang & Silbereisen, 1999; Kim et al., 2001). Juang and Silbereisen assessed adolescent adjustment, including measures of depression and self-esteem, in a sample of 283 German adolescents assessed annually for three years (mean age at first wave, 11.4 years). Across this span of early adolescence, the general trend was for measures of adjustment, including depression and perceived school self-efficacy to become more negative over time. However, adolescents who reported having consistently supportive parents (i.e., parents who were consistently rated highly on sensitivity, predictability, and school involvement) had lower levels of depression and higher levels of perceived school self-efficacy than did adolescents who viewed their parents as being inconsistently supportive. These differences were evident at all three assessment points. The authors did not, however, take advantage of the longitudinal nature of their data set to explore across-time associations or predictors of individual change.

Using data from the Iowa Youth and Families Project, Kim and colleagues (2001) examined associations between parent and adolescent negative affect observed in family interactions. As reported earlier, these researchers found consistency in adolescent negative affect and a general trend of negativity increasing from 7th through 10th grades and decreasing somewhat in 12th grade. Similar consistency and age trends were found for parent negative emotion. In addition, these researchers used multiple statistical techniques to examine reciprocal influences of adolescent and parent negative affect across assessments. Adolescent negative emotion was found to predicted subsequent parent negative emotion, and vice versa. In addition, high initial levels of negative emotion on the part of either partner (parent or adolescent) were found to be associated with a greater rate of increase in negative emotion across time on the part of the other partner. At the same time, however, the decreases in negative emotion expressed by either partner in parent-adolescent interactions across the later assessments (from 10th to 12th grade) were also greater when the other partner's initial levels of negative emotion were relatively high. Kim and colleagues suggest that this finding is indicative of an upper bound in the escalation process in most families. Kim and colleagues suggested that families exhibiting continued escalation of negative affect, rather than the curvilinear trend of escalation followed by reduction evident in this study, may be at risk for overt violence or a severing of the parent-adolescent relationship. In either case, such dyads would be unlikely to remain in the study for the full six years, and are thus unlikely to be represented in these analyses.

Call and Mortimer (2001) examined the effects of "arenas of comfort" on the emotional well-being of older adolescents. Based on the work of Simmons and colleagues (e.g. Simmons & Blyth, 1987; Simmons, Burgeson, Carlton-Ford, & Blyth, 1987), Call and Mortimer describe arenas of comfort as social contexts that provide individuals with a sense of safety, support, and unconditional acceptance, thereby allowing them to feel relaxed and completely at ease. Arenas of comfort provide individuals with places in which they can reenergeize their personal resources in order to face stressors found in other areas of their lives. Call and Mortimer investigated the effects of having one or more arenas of comfort on the mental health and achievement of high school students. The adolescents included in this study were 1,000 students (predominantly White) who were part of a randomly-selected sample of ninth grade students from the Minneapolis-Saint Paul area. The focus of this report is data collected during the first three annual surveys of this longitudinal investigation. Call and Mortimer focused on family, school, peer, and work as potential arenas of comfort. Each social context was considered an arena of

comfort (an all or none conceptualization) for an adolescent when he or she reported consistently experiencing high levels of support and low levels of stress or conflict. Outcome measures in this study included measures of self-esteem, self-efficacy, and depressive affect and sense of well-being. Call and Mortimer found that adolescents who reported relatively more arenas of comfort also exhibited higher concurrent self-esteem and self-efficacy, less depressive affect, and a stronger sense of well-being than did adolescents whose social contexts provided fewer arenas of comfort. These association were found to be significant even when controlling for background variables including race, SES, and family composition, and when controlling for earlier self-reported emotional well-being. These researchers further found that comfortable relationships within the family had a greater impact on emotional well-being than did school, peer, or work relationships.

Kerr and Stattin (2000) examined cross-sectional relations between parent-adolescent communication patterns and adolescent outcomes, including depressive symptoms, self-esteem, failure expectations, and feelings of being controlled in a sample of 1,077 Swedish 14-year-olds and their parents. Parents (one per household) and adolescents completed questionnaires regarding child self-disclosure, parental solicitation, parental control efforts, and parents' knowledge about the adolescent (including what their children do in their spare time and how they are doing at school). Kerr and Stattin hypothesized that adolescents who voluntarily provided information to their parents regarding their daily activities would exhibit more positive outcomes than would adolescents who did not do so. In addition, they expected that similar information when provided in response to parental solicitations, and parents' attempts to control their adolescent children's activities outside of the home, would be less associated with positive outcomes. Consistent with their hypotheses, results indicated that adolescents whose parents knew a good deal about them, particularly if that knowledge was obtained through the adolescent's voluntary self-disclosure, had higher self-esteem and less depressed mood, and were less likely to report failure expectations than were adolescents with less knowledgeable parents. In contrast, adolescents who felt controlled by their parents reported more depressed mood, lower self-esteem, and more failure expectations than did adolescents who did not report negative feelings of being controlled by their parents.

Another cross-sectional study was conducted by Jackson, Bijstra, Oostra, and Bosma (1998) with a sample of 660 13-15 year-old Dutch secondary school students. Low but significant correlations were found between adolescents' views of communication with their mothers and fathers (perceived open communication and perceived problems in communication) and several indicators of emotional well-being. The indicators of emotional well-being that were examined included negative versus positive affect (assessed as the frequency with which the adolescent experienced positive and negative feelings in recent weeks), global self-esteem, and coping (the extent to which the adolescent reported responding to different types of problems by (1) confronting the problem, (2) seeking social support, (3) avoiding the problem, and (4) becoming depressed). All but two of the predicted associations between communication patterns and adolescent emotional well-being were significant. The only nonsignificant associations were between reported problems in communication with both mothers and fathers and coping by seeking social support, and between perceived open communication with fathers and avoidant coping reactions.

Parenting styles and discipline practices

Parenting styles have been examined in cross-sectional and longitudinal studies as influences on a wide range of child and adolescent characteristics. One current area of particular interest is the extent to which parents support adolescent autonomy, as opposed to exerting high levels of control over adolescents' activities. A number of studies have found associations between adolescent perceptions of autonomy support from parents and indicators of emotional well-being, including self-esteem. As discussed above, Kerr and Stattin (2000) found that adolescents who felt controlled by their parents exhibited relatively high levels of depressed mood, low self-esteem, and failure expectations.

In a study including large samples of high school students from China and the United States, Bush (2000) examined associations between adolescents' perceptions of autonomy support from their parents, conformity to parents, and self-esteem. Because autonomy is often perceived as a distinctly Western value, these researchers hypothesized that autonomy would be a better predictor of self-esteem among American (all White) adolescents than among Chinese adolescents, while conformity was expected to be positively associated with self-esteem among the Chinese students, more so than among American students. Contrary to this expectation, however, Bush reported that perceived autonomy support, more than conformity, was associated with high self-esteem in both samples.

The value of autonomy support for child and adolescent development has not gone unquestioned, however. Some researchers have suggested that high levels of autonomy support may be more appropriate and more likely to promote positive well-being for children and adolescents living in middle-class communities than for children raised in communities where real risks to health and well-being are more extreme. In such high risk settings, parents who are more restrictive may promote more positive outcomes for their children. One recent study that provides some support for this view was conducted by McElhaney and Allen (2001). These researchers examined the extent to which environmental risk moderated associations between maternal autonomy support and adolescent social functioning in a sample of 131 ninth and tenth graders (47% female, 61% white) and their mothers. This was a well-designed study that included observations, mother-report, and adolescent-report measures. Results indicated that in low-risk samples, maternal behavior undermining adolescent autonomy was negatively related to adolescent social functioning. Adolescent expressions of autonomy (an observational measure) were associated with positive social functioning. In high risk samples, however, these associations were reversed. While this study focuses on social rather than emotional functioning, it demonstrated that SES may be an important factor to consider when examining the relationship between autonomy support and adolescent emotional well-being.

Characteristics of parents and families

In addition to characteristics of parent-child relationships, other characteristics of parents and families, including levels of conflict or harmony among family members, economic stressors impinging on the family, and divorce, are likely to impact adolescents' emotional well-being for a number of reasons. Parenting may be negatively affected when parents experience high levels of stress. Conflict within the family, as well as stressors impinging on the family from outside may lead parents to be overwhelmed and distracted, and make them less consistent sources of structure and emotional support for their children. When parenting quality declines, or when the adolescent is directly exposed to high levels of negative emotion from parents and other family members, an adolescent's developing capacities for coping and self-regulation may be exceeded.

Call and Mortimer (2001) found that adolescents from two-parent homes were more likely to have comfortable relationships with both parents, and to have more arenas of comfort generally, than were adolescents living in other family arrangements.

Studies have been conducted examining the effects of interparental conflict on children's emotional well-being. Rogers and Holmbeck (1997), for example, assessed relations between adolescent reports of interparental aggression and measures of adjustment, including global self-worth and depressive affect in an ethnically and socioeconomically diverse sample of 80 middle school students (52 girls). These researchers found that adolescents who experienced higher levels of interparental conflict exhibited more maladaptive coping strategy use, lower self-worth, and more depressed affect than did adolescents experiencing lower levels of conflict. Further, the authors reported that maladaptive coping (a composite that included relatively low levels of social support seeking, efforts to actively change the situation and to change the self, and relatively high levels of aggression, self-destructive responses, and ventilation of emotion) was negatively associated with perceived self-worth and positively associated with depressed affect.

Economic stress has been found to have a strongly negative impact on parents' own emotional functioning, and on their relationships with each other and with their children. In one study, Mayhew and Lempers (1998), using data from the Iowa Youth and Families Project, found that mother- and father-reported financial strain predicted both lower parental self-esteem and adolescent reports of non-supportive parenting. Low parents' self-esteem and non-supportive parenting were, in turn, associated with lower adolescent self-esteem. Mayhew and Lempers also found some gender differences in the strengths of the predictive associations among their measures. Most notably, parents' self-esteem was found to have a stronger direct effect on female adolescents' self-esteem than on males'. The authors predicted that this would be the case, based on a hypothesis that female adolescents would be more likely to perceive negative changes in parents' well-being than would male adolescents.

Summary

In summary, parenting practices, parent and family characteristics (including economic conditions and interparental conflict), and parental emotional well-being are associated with adolescent emotional well-being. Parents that provide a supportive home environment, including warmth, acceptance, and support for adolescent autonomy have been found to have adolescent children with higher levels of self-esteem and self-efficacy, and lower levels of depressed affect. Some research has suggested that the link between autonomy support and positive outcomes for adolescents may be found primarily in families living in relatively low-risk settings. Economic conditions, interparental conflict, and parental emotional well-being may each affect adolescent emotional well-being directly (for example, by increasing stress on the adolescent and by reducing both physical and emotional resources available to the adolescent) and indirectly, by reducing the ability of parents to maintain positive parenting practices and increasing the liklihood of nonsupportive parenting. More research is necessary before more definitive conclusions are made regarding most of these linkages.

Peer Characteristics

Studies with younger children have demonstrated the potentially devastating effects of peer rejection and social isolation on emotional well-being, as well as the potentially buffering effects of having a friend on the well-being of peer-rejected children. Research on the impacts of

adolescent-peer relationships on emotional well-being is comparatively scarce, but focus in this area is currently increasing.

To date, results do not present a consistently strong case for characteristics of peer relationships as antecedents of adolescent emotional well-being. Iin their study of seventh grade students participating in MAGICS (described earlier), Eccles, Early, Frasier, Belansky, and McCarthy (1997) assessed perceived connection, regulation, and support for autonomy across multiple social contexts (parent/child, sibling relationship, peer group, and school). These researchers did not find significant associations between peer group characteristics and depressive symptoms among adolescents, although associations were found with problem behaviors.

More mixed findings were reported by Call and Mortimer (2001) and Keefe and Berndt (1996). In their study (described earlier), Call and Mortimer found that comfortable relationships with peers were associated with greater feelings of well-being, self-esteem, self-efficacy, and with lower depressive affect, although comfort with peers was a relatively weaker predictor than was comfort in the family arena. These researchers further found that comfortable peer relationships did not buffer the negative impact of stressful family relationships for adolescents. Keefe and Berndt also found significant correlations between concurrent measures of friendship quality and self-esteem and perceived social and behavioral competence in a sample of 297 seventh and eighth graders. However, friendship quality measures taken early in the fall semester did not uniquely predict self-esteem or perceived competence assessed in the spring semester (controlling for self-esteem or perceived competence assessed in the fall semester). One reason for this lack of association in this case was very high correlations across assessments for both the self-esteem and the perceived competence measures. The high level of stability in these measures left very little variability in second semester self-esteem scores or perceived competence scores that could be explained by factors other than the first semester scores on the same measure. Overall, then, it appears that more research is needed on associations between peer relationships and adolescent emotional well-being.

Other studies have been conducted demonstrating interactions between quality of experiences in peer and family relationship domains and adolescent emotional well-being. Gauze, Bukowski, Aquan-Assee, and Sippola (1996) examined relations between family environment measures, friendship measures, and young adolescents' feelings of self-worth and perceived social competence in a Canadian sample of 138 fourth- through sixth-grade students (primarily White). Eighty-one (83%) of the fourth and fifth grade students were assessed a second time nine months later, when they were in fifth and sixth grades. Family environment measures in this study included family cohesion (i.e., emotional bonding among family members and the degree of individual autonomy accepted within the family) and adaptability (i.e., the ability of the family to adapt to changing situational and developmental pressures by modifying family roles, power structures, and social rules). Friendship variables included the presence or absence of a mutually reciprocated friendship and friendship quality (i.e., perceptions of companionship, help/support, security, and closeness in their "best friend" relationship). The three main findings of this study were that 1) friendship measures were generally more predictive of self-worth and social competence perceptions among adolescents from families that were low in adaptability and cohesion than for adolescents with more cohesive and adaptible families, 2) the global self-worth and perceived social competence of adolescents with no mutual friend and those with low quality friendships were more strongly affected by family cohesion and adaptability than were self-perceptions of adolescents with higher quality friendship experiences,

and 3) positive or negative changes in friendship quality and having a mutual friend had stronger impacts on changes in global self-worth and perceived competence among adolescents living in families low in adaptability than among adolescents with more adaptable families. Thus, in contrast to the findings with older adolescents reported by Call and Mortimer (2001), the results of this study indicate that the extent to which characteristics of family relationships affect emotional well-being is moderated by characteristics of friendships, and vice versa.

School-Level Characteristics

Of the non-familial influences on child and adolescent outcomes, schools have been the most widely investigated. Although the majority of this work has focused on academic outcomes, including academic performance and motivation, there are findings within the literature relevant to emotional well-being as well. Studies have been conducted, for example, on the associations of classroom characteristics, including goal structures (i.e., ability and competition versus learning and cooperation), perceptions of autonomy support, and emotional involvement from teachers on children's self-esteem, perceived competence, and perceived control in the academic domain (e.g., Call & Mortimer, 2001; Dweck, 1991; Midgley, Feldlaufer, & Eccles, 1989; Roeser et al., 1998; Roeser, Midgley, & Urdan, 1996; Ryan, Stiller, & Lynch, 1994).

In their analyses of data from the MAGICS longitudinal study, Roeser and colleagues (1998) found that, after controlling for demographic characteristics and earlier-reported emotional functioning, adolescents' perceptions of their schools as placing emphasis on ability and competition, of negative treatment in school due to gender and due to race or ethnicity all predicted diminished emotional adjustment (i.e., increases in self-reported experiences of anger and depressive affect) over time. In contrast, perceptions of positive teacher regard, including support for competence and autonomy, predicted positive change in emotional adjustment during middle school.

Roeser and colleagues (1996) examined the effects of perceived school goal structures, personal goal structures, and the quality of student-teacher relationships on psychological outcomes for adolescents, including academic self-efficacy, positive school-related affect, and academic self-consciousness. The sample included 296 students (50% female, 87% White) who were first assessed in a sixth grade middle school class and who were subsequently seen two years later, in eighth grade. The same measures were collected at the two time points, allowing for an examination of the direction of effects of the various measures on each other. Two types of school and personal goal structures were examined. A task mastery goal structure involves perceptions that the goals of educational activities are personal mastery and intellectual development. A relative ability goal structure, in contrast, reflects conditions where the perceived primary goals of educational activities are to succeed in competition with other students for recognition and rewards. Among the key findings from this study were that perceiving a task goal structure within the school was associated with academic self-efficacy (i.e., adolescents' beliefs in their own ability to master school materials and skills), and that this association was mediated by personal task goals. Perceiving a relative ability goal structure, in contrast, was associated with self-consciousness (i.e., nervousness and anxiety in school, particularly in performance situations). This association was mediated by personal relative ability goals. Finally, perceiving positive teacher-student relationships was associated with positive affect in school, and this relationship was mediated through feelings of belonging at

school. The results of this study are consistent with the work of Dweck and her colleagues (e.g. Dweck, 1991; Dweck & Leggett, 1988) and support the view that ability or performance goals that emphasize success in competition with other students undermine engagement and perceptions of efficacy within the school setting, particularly for students of lesser ability, while task mastery goals that place more emphasis on the process of learning and mastery of the materials and skills to be learned without reference to other students' accomplishments promotes perceptions of self-efficacy and engagement in school.

In a report from the first two years of data collection from the study that would later become the MSALT, Midgley and colleagues (1989) examined changes in the value that students place on mathematics across the transition from elementary to middle school. Although general deterioration in young adolescents' school-related performance and achievement-related beliefs have frequently been cited, Midgley and colleagues hypothesized that the extent to which decrements or increments in the value that adolescents place on mathematics were reported would be associated with decrements or increments in the perceived levels of support students receive from teachers. They tested this hypothesis with a subsample of 1,301 students who transitioned from a sixth grade elementary classroom to a seventh grade junior high school classroom between the first and second years of the study and who had the same teacher for mathematics for two semesters each year. The value variable was a composite reflecting affective responses to mathematics (liking math and finding it boring versus interesting). The teacher support variable involved perceptions of the consistency with which the teacher provided positive support to students in general (rather than to the individual student). Consistent with hypotheses, Midgley and colleagues found that when students transitioned from a classroom in which the teacher was perceived as being low in support to a classroom where the teacher was perceived as being more supportive, the value placed on math increased, while perceived value decreased when the transition was from a more supportive to a less supportive classroom environment. Declines in the perceived value of math appeared to be particularly steep for low-achieving students.

Ryan and his colleagues (1994) examined seventh and eighth grade students' perceptions of the quality of their relationships with teachers, as well as with parents and friends, and the relations between these perceptions and global self-esteem, positive coping in school, perceived autonomy with respect to academic tasks, perceived control, and emotional and behavioral engagement with school. Positive coping involved students' self-reports of responding to negative academic outcomes by actively seeking to remedy the cause of poor performance. Perceived autonomy involved reporting that academic tasks are engaged in for intrinsic reasons (because they are enjoyable) or internalized reasons (because they are important) rather than for more external or introjected reasons (in order to avoid punitive consequences that are inflicted either by teachers or other adults or that are self-imposed). Perceived control was a measure that assessed the extent to which students believed that they could control whether or not they did well in school. Ryan and colleagues found that all of these emotional well-being outcomes were positively associated with self-reported positive relationships with parents and teachers. Interestingly, however, when both parent and teacher relationship qualities were included within the same analysis, only parent relationship quality was significantly associated with global self-esteem—the one outcome that was not specific to the academic domain.

As mentioned earlier, Call and Mortimer (2001) found that comfort in the school setting was associated with increased emotional well-being (subjective well-being, self-esteem, mastery, and low depressive affect) among high school students, although effects were not as strong as

were effects of comfort in family relationships. These researchers further reported that perceived supportive relationships with teachers and absence of stress at school both moderated the associations between family changes and increased adolescent depressive affect, although comfort in the school arena did not generally buffer the negative consequences of strained parent-adolescent relationships for adolescent emotional well-being.

Summary

In summary, having teachers that are supportive of adolescents' autonomy and give positive feedback and support for mastery of academic topics has been found to be associated with higher levels of adolescent self-esteem and self-efficacy (including perceived competence), and positive coping strategies. The ethos of the school may also be related to adolescent emotional well-being. For instance, results suggest that perceiving the school environment as being autonomy-promoting is associated with positive self-esteem and self-efficacy.

Neighborhood and Community Influences

There is little research that directly assesses the relationship of neighborhood and community influences with adolescents' emotional well-being. It is possible, however, that factors such as high unemployment and high poverty levels within neighborhoods may promote feelings of helplessness and perceptions of lack of competence in individuals. Relevant to this suggestion, Taylor (2000) found that mother-reported neighborhood characteristics such as deterioration, crime, and presence or absence of resources were negatively related to adolescent self-esteem and positively associated with psychological distress. Numerous methodological problems with this study, however, limit the conclusions that can be drawn from it.

Findings from studies on the relationship between unemployment and the emotional well-being of adolescents who have left school are mixed. Patton and Noller (1984) examined differences in depression, self-esteem, and locus of control between three groups of Australian adolescents first assessed during their final year of compulsory schooling: adolescents who left school and were subsequently unemployed, adolescents who left school and who obtained full-time employment, and adolescents who returned to school the following term. Results indicated that, relative to both the employed adolescents and those that returned to school, unemployed adolescents exhibited declines in self-esteem, increases in depression, and increases in external locus of control from time 1 (prior to school departure) to time 2 (following school departure). Patterson (1997) also examined the effect of becoming employed, versus remaining unemployed, using a group of British 16-17 year-olds who had been unemployed for six or more months at the time of the first assessment. Contrary to the Patton and Noller study, Patterson found no effect on self-esteem of becoming employed, versus remaining unemployed, 10 to 12 months after the first assessment.

Call and Mortimer (2001) included comfort within the work setting for the employed high school students participating in their study. They found that the majority of employed students reported being comfortable in their work settings—they found their work to be interesting and ejoyable and they perceived their work supervisors as supportive. As with the peer and school arenas, these researchers found that comfort in the work arena was associated with higher self-esteem, general well-being, and mastery, and with decreased depressive affect, although the associations were relatively weaker than the associations between these outcomes and comfort in family relationships. Unlike the school and peer arenas, however, Call and

Mortimer found that one aspect of comfort in the work setting—support from supervisors—did moderate the effect of family discomfort on adolescents' general well-being, self-esteem, and mastery. Further, low work stress and support from a best friend in the work setting were also found to moderate the effects of stressful family changes, including changes in father's employment status and changes in family composition, on adolescent self-esteem and perceived well-being.

Interventions to Enhance Emotional Well-Being

Emotional well-being is not a frequent focus as an outcome of prevention and intervention programs. Measures of aspects of emotional well-being, such as self-esteem and depression, are sometimes included in evaluations of such programs, but often in a rather atheoretical manner. In other cases, a focus on emotional well-being may be more integral to the intervention, although again the outcomes of interest tend to involve social skills and prevention of risk-taking and antisocial behavior. Inteventions may seek to improve adolescent's emotional self-regulation skills and ability to recognize and accurately interpret their own emotions as well as the emotions of others, usually with the ultimate goal of increasing social competence and decision-making skills, and thereby decreasing maladaptive behaviors. Zins and his colleagues, for example, discuss the value of social and emotional learning (SEL) programs, with a particular focus on how these programs help children and adolescents avoid high risk activities and situations, such as drug use, interpersonal violence, and school failure (e.g. Zins, 2001; Zins, Travis, & Freppon, 1997; Zins & Wagner, 1997).

Coping has been specifically targeted by a few interventions. In a review of programs designed to promote positive mental health in adolescents, Compas (1993) highlighted several programs specifically designed to improve adolescents' general coping skills. Among the programs reviewed by Compas are the Yale-New Haven Social Problem-Solving program (YNH-SPS; Weissberg, Caplan, & Bennetto, 1988; Weissberg, Caplan, & Sivo, 1989) and the Comprehensive Stress Management Program for Children (Ledoux, 1985). Evaluations of these and similar programs suggest that teaching stress management techniques to adolescents can increase adolescent well-being in multiple domains, including emotional well-being. Weissberg et al. (1989) found that students who completed the YNH-SPS program demonstrated improved social problem-solving skills necessary for positive coping with social stressors, and demonstrated increased impulse control. Compas et al. (1991) evaluated the Comprehensive Stress Management Program for Children and found that adolescents who completed the program demonstrated increased use of emotion-focused coping skills and perceptions of personal competence, and decreased perceptions of stress and externalizing emotional and behavioral problems.

Based on his review, Compas (1993) suggested that in order to establish effective intervention programs to promote emotional well-being in adolescents, the following considerations should be included: (1) make certain that the goals of the intervention reflect the divergent perspectives of all interested parties, including adolescents, parents, teachers, and other relevant groups; (2) interventions should be developmentally sequenced, with child, adolescent, and adult interventions more adequately integrated; (3) identify how interventions that are designed to promote overall well-being and skills and interventions designed to address specific issues (such as substance use and abuse) can most effectively work together to bring about desired change; (4) focus interventions on both adolescents and their environments (as positive

changes in adolescent functioning cannot be sustained without modifying the environment as well); (5) obtain data to adequately evaluate the level of program implementation and the effects of the program; (6) for programs conducted in schools, develop an understanding of characteristics of the pre-existing school culture that may influence the effectiveness of these programs; (7) do not rely on schools as sole sites for intervention efforts, but rather develop programs to reach adolescents who are no longer in school, and to work with families and others within non-school settings; and (8) incorporate efforts to promote positive emotional well-being with efforts to promote physical health and well-being.

Somewhat more specific information is available in the area of school reform. Numerous studies have been conducted over the years demonstrating the negative impact of the use of external reward on intrinsic motivation for engaging in school activities, and the positive effects of autonomy support on adolescent emotional well-being (see Deci & Ryan, 1985; Harter, 1983). As expressed by Roeser et al. (1998), "Schools can also enhance the quality of adolescents' academic and emotional functioning by supporting their needs for autonomy....this can be done in part by providing adolescents with opportunities to make choices about seating, topics, and work partners; to share their viewpoints in class discussions; and to learn curricula that speaks to their life experiences and to issues encountered in contemporary society." (p. 346).

There are several school reform efforts that have been implemented based on the view that school environments supportive of children's and adolescents' basic needs to feel competent, to feel autonomous, and to feel related to important others within their social environments, promote positive functioning (e.g. Connell & Wellborn, 1991; Skinner et al., 1998). When these needs are met, students will be engaged with school, as indicated by positive emotion, interest, focused attention, and effort applied to schoolwork. Such positive engagement will, in turn, promote positive cognitive and emotional outcomes for students. Connell and his colleagues have developed a program, entitled First Things First, based on this motivational model. First Things First has been implemented and evaluated in all schools within one large urban school district and is currently in the process of being implemented in selected schools in additional districts. Although post-implementation evaluation data is only beginning to become available, there is early evidence of dramatic improvements in student engagement (including positive emotion) and academic outcomes (Institute for Research and Reform in Education, 1997).[1]

A more specifically-targeted program, the School Transition Environment Project, was developed by Felner and his colleagues (see Felner & Adan, 1988). This program was designed to change schools' environment during the period of transition from junior to senior high schools in two primary ways: (1) by having homeroom teachers provide a link between students, parents, and the school, and provide additional support to students, and (2) by keeping students in groups that attend all academic classes together. Both of these changes promote a school environment that more adequately meets adolescents' needs for relatedness (with adults and with peers) at a particularly stressful time. Felner and Adan found that participants in this program were not only absent less often and showed improvements in grades relative to a control group of adolescents, but also maintained prior levels of self-esteem while the control group adolescents (consistent with other research) demonstrated declines in self-esteem.

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[1] Information on First Things First can be obtained by contacting Laurie Levin, Director, Institute for Research and Reform in Education, at Laurie_Levin@irre.org, or by visiting the Kansas City, Kansas Public School web site, http://www.kckps.k12.ks.us.

Summary

Few programs have been implemented that focus specifically on increasing the emotional well-being of adolescents as a target outcome, although interventions more frequently include attempts to improve emotion regulation and understanding in order to promote positive outcomes and decrease risk-taking and antisocial behavior. A focus on coping is more frequent, however. As Compas (1993) found in his review of programs promoting positive mental health, adolescents who went through programs that teach stress management techniques, compared to those who had not, were better able to cope with stressors in multiple situations. Also, data is being collected from school reform interventions that seek to increase adolescents' feelings of autonomy and self-efficacy. The analyses are in their early stages, but promising results are beginning to emerge.

Summary

Before discussing the conclusions that can be drawn from the numerous studies in this report, it is important to remember that the research, overall, has several methodological limitations. Most use a correlational design and only some used data collected over time. Therefore, all implications should be read with caution.

In summary, studies have found that there is consistency in individual differences in emotional well-being in adolescence. Further, research suggests that individual differences in emotional well-being are associated with characteristics of adolescents' environments, including parent and family characteristics, school characteristics, and neighborhood and community characteristics. A few studies have also found that positive changes in emotional well-being can be promoted by changes in the environment.

Several of the studies discussed in this report present implications for programs and school reform efforts. In addition, Rosenberg and colleagues (1995) discuss implications of their findings for interventions attempting to promote positive changes in adolescent well-being. As noted earlier, these researchers suggested that global self-esteem is primarily affective, rather than cognitive, and their research supported the view that global self-esteem was more strongly related to emotional well-being measures than was specific self-esteem. For example, academic self-esteem was more strongly associated with school outcomes than was global self-esteem. Based on these findings, Rosenberg and colleagues suggest that bolstering global self-esteem should not be expected to change specific behaviors, nor should changes in specific behaviors be expected necessarily to enhance global self-esteem.

Finally, and perhaps the clearest implication of the studies cited in this report, there is a strong association between adolescents' emotional well-being and positive environments (including family and school environments) that provide adolescents with a sense of belonging, acceptance, and support for autonomy.

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Table 1: Review of the Research Literature and Implications for Targeted Activities to Improve Adolescent Emotional Well-Being

AREAS FOR TARGETED INTERVENTION ACTIVITIES	WHAT WORKS	WHAT DOESN'T WORK	MIXED REVIEWS	BEST BETS
Self-esteem	- Promote connections between adolescents and their teachers and peers during the transition years from junior to senior high school. (The School Transition Environment Project)			- Promote positive self-esteem by promoting positive self-concepts in academic and social realms. - Promote achievement in specific areas of youth's life (e.g., academic, athletics) - Promote parenting strategies that involve supporting youth's autonomy. - Promote parenting strategies that include being supportive and having open communication with youth. - Promote teaching practices that include support for youth autonomy. - Implement school policies that promote autonomy.
Perceived competence				- Increase adolescents' perceived social competence - Promote teaching practices that include support for youth autonomy. - Implement school policies that promote autonomy. - Implement school policies that emphasize the mastery of skills over inter-student competition.
Coping	- Teach adolescents general coping techniques and stress management skills (e.g., Yale-New Haven Social Problem-Solving program, Comprehensive Stress Management Program for Children).			